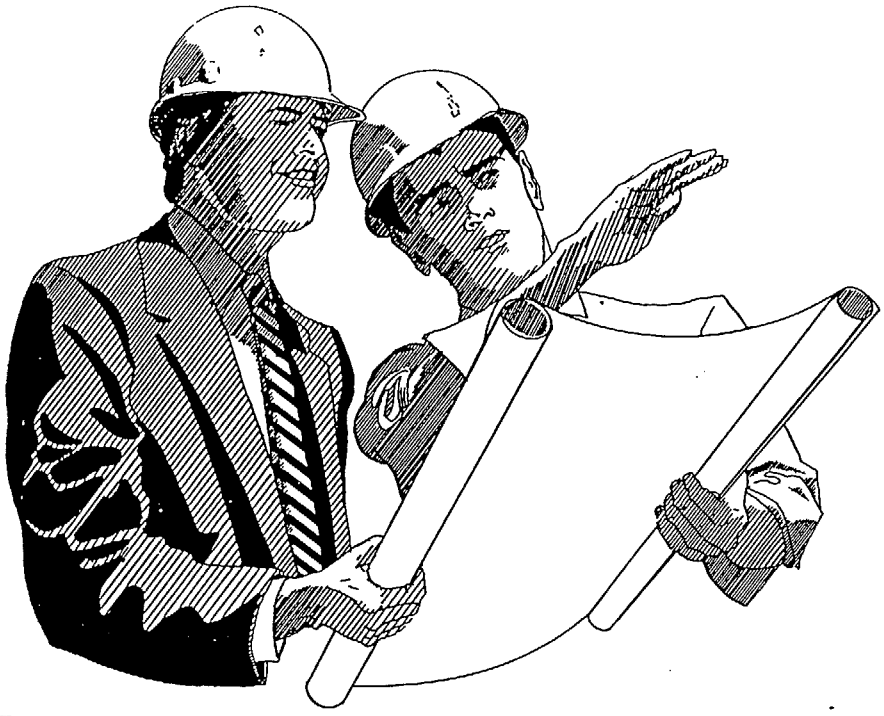
Chapter Six
AIRPORT PLANS



Chapter Six
AIRPORT PLANS

In Chapter Four, an evaluation was made of future options for airfield and terminal area development. This resulted in the selection of an alternative for future airport improvements that could accommodate previously identified requirements for airport facilities. The purpose of this chapter is to describe in narrative and graphic form, the recommended development proposed during the planning period.

A set of plans, referred to as **Airport Layout Plans**, has been prepared to graphically depict the recommendations for airfield layout, disposition of obstructions in the airport environs, and future use of land in the vicinity of the airport. This set of plans includes:

- Data Sheet
- Airport Layout Plan
- North Terminal Area Plan
- South Terminal Area Plan
- Part 77 Airspace Plan
- Approach Zones Plans - Runways 4L-22R, 4R-22L
- Runway Protection Zones Plans - Runways 4L-22R, 4R-22L
- Land Use/ Noise Plan
- Fence Location Plan

An analysis of future land use was conducted for both on-airport property and areas lying outside the airport property, but within the airport's environs. Land use compatibility has been an important consideration in all planning phases. Therefore, recommendations have been provided in this chapter to maintain a compatible environment between on-airport and off-airport development.

The airport layout plan set has been prepared on a computer-aided drafting system for future ease of use. The set has been prepared on software that will be compatible with the software currently utilized by the City of Mesa.

The computerized plan set provides detailed information of existing and future facility layouts on multiple layers that permit the user to focus in on any section of the airport at any desirable scale. The plan can be used as base information for design, and can be easily updated in the future to reflect new development, and more detail concerning existing conditions as made available through design surveys. The plan set is also being provided in 24-inch x 36-inch reproducible hard copy in accordance with current FAA standards.

AIRPORT DESIGN STANDARDS

Mesa-Falcon Field Airport is identified as a Reliever airport in the FAA National Plan of Integrated Airport Systems (NPIAS). FAA Advisory Circular 150/5300-13, Airport Design, outlines recommended design standards for airports. These design standards are based upon the characteristics of aircraft the airport is expected to serve on a regular basis. Most critical are the weight, wingspan and approach speed of the design aircraft. An airport's reference code (ARC) is based upon a combination of the aircraft approach category and the airplane design group (ADG).

The aircraft approach category is a grouping of aircraft based upon an aircraft's approach speed (calculated as 1.3 times the aircraft stall speed) in their landing configuration at their maximum certificated landing weight. The categories are as follows:

- **Category A:** Speed less than 91 knots.
- **Category B:** Speed 91 knots or more but less than 121 knots.
- **Category C:** Speed 121 knots or more but less than 141 knots.
- **Category D:** Speed 141 knots or more but less than 166 knots.
- **Category E:** Speed 166 knots or more.

The airplane design group is a grouping of airplanes based on wingspans. The groups are as follows:

- **Group I:** Wingspans up to but not including 49 feet.
- **Group II:** 49 feet up to but not including 79 feet.
- **Group III:** 79 feet up to but not including 118 feet.
- **Group IV:** 118 feet up to but not including 171 feet.
- **Group V:** 171 feet up to but not including 214 feet.
- **Group VI:** 214 feet up to but not including 262 feet.

Runway 4L-22R will be designed to meet the requirements for a B-II runway serving aircraft with gross weights of 12,500 pounds or less while Runway 4R-22L will be designed for aircraft with gross weights in excess of 12,500 pounds. Therefore, the ARC for design at Mesa-Falcon Field Airport will be **B-II**.

The design standards for Mesa-Falcon Field Airport are summarized in **Table 6A**. Runway 4R-22L is the primary runway with a length of 5,100 feet, a width of 100 feet and a pavement strength of 38,000 pounds single wheel loading (SW) 50,000 pounds dual wheel loading (DW) and 90,000 pounds dual tandem wheel loading (DTW). This runway will be lengthened to 6,000 feet by extending both runway ends. The pavement rating will increase in total strength during the planning period as a result of routine pavement maintenance overlays.

A standard 300 foot long safety area can be made available off the ends of both the primary runway and secondary runways. The object free area length of 600 feet cannot be achieved on Runway 4R-22L after the runway ends are extended and the airport will require a waiver of this standard from FAA. Due to the proximity of the major arterials (Greenfield Road at the end of Runway 4R and Higley/McDowell Roads at the end of

Runway 22L), runway threshold displacements will be required on both runway ends. The length of the displacements will vary depending upon the instrument rating of the runway end. Runway end displacements should be scheduled with the construction of the runway end extensions.

Parallel Runway 4L-22R is 3,800 feet long and 75 feet wide with a pavement strength of 12,500 pounds. single wheel loading (SW). The existing runway meets FAA design standards for ARC B-II, a runway serving small aircraft (aircraft weighing less than 12,500 pounds) including aircraft with up to ten passenger seats. Wind coverage provided by the runway system at Mesa-Falcon Field Airport is such that FAA design standards do not indicate a need for a crosswind runway for aircraft in Approach Categories A through D. According to FAA design standards, the 100-foot width of Runway 4R-22L is more than adequate.

Table 6A
Airfield Design Standards
Mesa-Falcon Field Airport

	Runway 4R-22L	Runway 4L-22R
Runways		
Length (feet)	6,000	3,800
Width (feet)	100	75
Strength (pounds)	38,000 SW/50,000 DW	12,500 SW
Safety Area		
Width (feet)	150	150
Length Beyond End (feet)	300	300
Object Free Area		
Width (feet)	500	500
Length Beyond End (feet)	600	600
Runway Centerline to:		
Building Restriction Line (feet)[1]	500	375
Aircraft Parking Limit (feet)	250	250
Hold Line (feet)	200	125
Taxiway Centerline to:		
Parallel Taxilane Centerline (feet)	105	69
Fixed or Movable Object (feet)	65.5	44.5
Runway Protection Zones		
Inner Width (feet)	500	250
Length (feet)	1,700	1,000
Outer Width (feet)	1,010	450
Approach Slope	34:1	20:1

NOTE: [1] The Building Restriction Lines (BRL) are set at a location where adequate clearance will be achieved from the Part 77 imaginary surface, for a building 35 feet or less in height. The BRL may be adjusted for buildings of greater or lesser heights.

AIRPORT LAYOUT PLAN

The *Airport Layout Plan* (ALP) graphically presents the existing and ultimate airport layout. It depicts the recommended improvements which will enable the airport to meet forecast aviation demand. The ALP also shows areas of land acquisition to meet development standards and other requirements. The detailed airport and runway data are provided on the Data Sheet to facilitate the interpretation of the master plan recommendations.

The *Airport Layout Plan* (ALP) consists of a *Data Sheet* (**Sheet No. 1**) and the ALP (**Sheet No.2**). The ALP shows a number of airport improvements associated with both the airfield and terminal area. The improvements in the terminal area are illustrated in more detail and in a larger scale on the Terminal Area Plan drawings and are discussed later in this chapter.

The principal airfield recommendations consist of lengthening the primary runway, Runway 4R-22L, additional property acquisition and taxiway improvements. Runway 4R-22L will be lengthened to 6,000 feet in two stages. In Stage I of the development program, Runway 4R will be extended 350 feet. In Stage II, Runway 22L will be extended 550 feet. The future length of 6,000 feet will provide a significant increase in the capacity of aircraft to operate at the airport during high temperature conditions.

Recommended land acquisition consists of three property parcels. In order to provide adequate approach protection, it is recommended that two parcels, one located south of the approach end to Runway 4R and the other located west of Runway 4R, be purchased in Stage I. These parcels are 37.06 and 34.36 acres, respectively. A third parcel of land is recommended for acquisition during Stage II. This 33.3 acre parcel will provide the additional area required for future general aviation expansion anticipated during the latter half of Stage II as well as Stage III. With the acquisition of this property, the airport perimeter fencing should be relocated. One of the major focal points throughout the planning period is to improve the efficiency of airport operations and reduce takeoff and landing delays. The traffic patterns at Mesa-Falcon Field are to the north at this airport in order to reduce overflight of residential areas to the southeast of the airport. Airspace management is constrained by these procedures during periods of high aircraft activity and airfield improvements that can reduce the time aircraft occupy the runway reduce the impact of the northern traffic pattern orientation.

Several taxiway improvements are planned as well as apron/taxiway holding areas. Two hi-speed exit taxiways are planned for Runway 4L-22R in order to expedite aircraft movement from the runway and reduce the time spent in the traffic pattern between landing aircraft. Several holding aprons as well as taxiway extensions are planned on both sides of Runway 4R-22L to the extended runway ends. These holding aprons will provide opportunities for aircraft to pass one another on single taxiways and serve as a runup area prior to takeoff. A dual taxiway is planned between B-3 and B-6 in order to provide quicker and more efficient access for aircraft transitioning between the parallel runways. As operational activity increases, the importance of these improvements should not be underestimated. Other airfield development items include:

- **Runway and Taxiway Lighting:** Medium intensity runway lighting (MIRL) will be installed on the extended runway pavement. Medium intensity taxiway lighting (MITL) is planned for all existing and future taxiways/taxilanes.

- **Runway and Taxiway Marking:** Runway 4R-22L should be marked with nonprecision markings when the airport nonprecision approaches are established.

- **Precision Approach Path Indicators (PAPI's):** PAPI's are presently in place on both runways. The PAPI's on Runway 4R-22L are scheduled to be relocated upon completion of the runway extensions.

- **Runway End Identifier Lights (REIL's):** These navigational aids should be maintained at the thresholds of Runway 4R-22L.

- **Airport Fencing:** Additional airport fencing is planned throughout the planning period in order to increase security and prevent public vehicle incursions.

TERMINAL AREA PLAN

The Terminal Area Plan is a two-plan set which presents a refinement of the selected development configuration and provides a detailed staging plan for construction of facilities to meet forecast aviation demands. The *North Terminal Area Plan* (Sheet No. 3) and *South Terminal Area Plan* (Sheet No. 4) depict the planned airport development north and south of the runway system, respectively. The long term plan is to provide more new general aviation facilities such as T-hangars and additional apron.

The *North Terminal Area Plan* depicts the planned construction of a final approach and takeoff pad (FATO) on the west end of the existing tiedown area. This plan also indicates property that is optioned to McDonnell Douglas Helicopter Company for possible long term expansion of the plant facilities. Corporate and/or commercial development is planned north of the tiedown area.

The *South Terminal Area Plan* illustrates the planned construction of over 215 T-hangars as well as the general pattern of development throughout the planning period. The property acquired in Stage II south of the existing T-Hangar area is fully developed by Stage III of the development program. Road construction to provide access to the area will commence in Stage II after the property is acquired. Additional fencing will be installed to secure the new area.

In order to accommodate larger aircraft (aircraft wingspans up to 79 feet in length) taxiing into the new hangar area, removal and relocation of T-Hangar units (nested units O and C) will be required.

The passenger terminal area will remain at the center or focal point of the terminal area. The building will be expanded in both Stage II and Stage III. The Falcon Drive underpass will be necessary to insure that the anticipated increase in operational activity does not result in an aircraft/vehicular accident. By constructing the Falcon Drive underpass, the airport's intrinsic continuity can be retained and safety and/or inadvertent vehicular incursions on the airfield system can be avoided.

The east end of the terminal area is planned for commercial/industrial development. The new apron expansion east of the terminal building will accommodate larger and heavier aircraft types that are unable to use the existing apron areas. Additional taxiway connectors will be constructed and some taxiways expanded and/or extended. These improvements will increase the efficiency of aircraft movement between the hangar and the runway areas. Holding areas are also being constructed at strategic locations to provide bypass capability on some taxiways as well as runup areas at the ends of the runways.

F.A.R. PART 77 AIRSPACE PLAN

The *Airspace Plan* for Mesa-Falcon Field Airport is based on Federal Aviation Regulations (F.A.R.) Part 77, **Objects Affecting Navigable Airspace.** In order to protect the airspace and approaches to each

runway from hazards which could affect the safe and efficient operation of the airport, federal criteria has been established (F.A.R. Part 77) for use by local planning and land use jurisdictions to control the height of objects in the vicinity of the airport.

The *Airspace Plan* is designed to illustrate the Part 77 imaginary surfaces that are applicable to Mesa-Falcon Field Airport. The surface heights, angles and radii are determined by the type of runway and its instrumentation. The *Airspace Plan* shown on **Sheet No.5** of the ALP set, reflects Part 77 critical surfaces for the *recommended* airfield development. The plan depicts the critical surfaces for the nonprecision instrument approach to Runways 4R-22L and visual approaches to Runway 4L-22R. As will be discussed later in this chapter, this drawing can be utilized in the updating the Air Field Overlay District zoning ordinance of the City of Mesa.

The *Airspace Plan* drawing indicates the obstructions located within the imaginary and supplemental surfaces of the airport. The runways at Mesa -Falcon Field Airport each have a primary and transition surface that connects to the horizontal and conical surfaces. Each of these surfaces are described in the paragraphs that follow, including each obstruction, if any, found in the imaginary surface.

PRIMARY SURFACE

The primary surface for Runway 4L-22R is 4,200 feet in length and 250 feet wide, centered on the runway. The primary surface for Runway 4R-22L will be 6,400 in length and 500 feet wide. There are no obstructions located within the primary surface of either of these runways.

TRANSITION SURFACE

Each runway has a transition surface that connects the primary surface to the horizontal surface. All transition surfaces have a slope that is 7-to-1. There are no obstructions within the transition surface of Runway 4L-22R, however, there are several obstructions in the transition surface of Runway 4R-22L.

Two obstructions in the transition surface of Runway 22L are a pole and a tree. These obstructions should be removed. The ATCT and the water tower are obstructions to the transition surface but they are lighted and are not considered hazards.

HORIZONTAL SURFACE

The horizontal surface is established at 150 feet above the highest elevation on the runway(s), from the transition/approach surface to the beginning of the horizontal surface, at a distance of 10,000 feet from the primary surface of each runway. There is no slope to the horizontal surface. There are three objects located east of the airport that are identified as obstructions to the horizontal surface. The ground, a pole and a light standard are indicated as obstructions in the horizontal surface illustrated on **Sheet No. 5.**

CONICAL SURFACE

The conical surface begins at the outer edge of the horizontal surface and continues for an additional 4,000 feet at a slope of 20-to-1. On **Sheet No. 5**, there are four electric power poles identified as obstructions to the conical surface. All of these obstructions should be lighted.

SUPPLEMENTAL SURFACE

The airport's supplemental surface begins at the conical surface and extends outward from the airport's reference point a distance of 3 nautical miles. The height of objects are controlled within this area to a maximum height of 500 feet. There are five obstacles located within the supplemental airport

surface that are noted as obstructions based on the Part 77 criteria. It is recommended that the airport request an evaluation by FAA as to whether or not these obstructions qualify as a hazard to air navigation before action is taken to remove or light the obstruction.

APPROACH ZONES PROFILES

The *Approach Zones Profiles* (**Sheet No. 6**) is a profile representation of the approach surfaces to each runway. The drawings depict the physical features in the vicinity of each runway, including topographic changes, roadways, drainage ditches, and trees. The dimensions and angles of approach surfaces are a function of the runway service category and the approach classification. The existing and ultimate approaches for Runway 4L-22R at Mesa-Falcon Field Airport will remain the same (visual approaches with slopes of 20-to-1).

When Runway 4R-22L is extended, Greenfield Road and McDowell/Higley Roads will become obstructions to the approach surface to Runway 4R and 22L respectively. In addition, Runway 4R-22L are planned for non-precision instrument approaches with slopes of 34-to-1. Either or both of these circumstances will require a runway threshold displacement.

With a nonprecision instrument approach to Runway 4R, the runway threshold displacement is approximately 395 feet. A similar approach to Runway 22L will require a threshold displacement of approximately 625 feet. Before either of the runway threshold displacements are constructed, a field survey should be conducted to determine the actual displacement required.

PROTECTION ZONE PLANS

The *Protection Zones Plans* (RPZ) are depicted on **Sheet No. 7**. These plans consist of large scale plan and profile views of the inner portion of the approach surfaces. This facilitates identification of obstructions, roadways, and buildings that lie within the confines of the clear area located at the end of each runway. The *Protection Zones Plan* illustrates the elevations of the roadways and the approach slope clearances whenever a roadway transits an RPZ.

As depicted on the plans, the existing airport property boundaries encompass all the runway protection zones except Runway 22L and 22R. The remainder of the property within each protection zone which exceeds airport boundaries is controlled by an avigation easement. Additional avigation easements will be required for the future RPZ's for Runway 4R and 22L.

The airport reference code and runway instrumentation control the size of the RPZ's. The existing and future RPZ for Runway 4L-22R is the same and is 250 feet X 1,000 feet X 450 feet. The future RPZ's for Runway 4R-22L will require an RPZ that is 500 feet X 1,700 feet X 1,010 feet. The RPZ will also be relocated to begin 200 feet from the extended runway ends. Although the runway thresholds on both runway ends are displaced, the location of the RPZ is required to remain 200 feet from the *actual* runway end.

AIRPORT LAND USE

The objective of the *Land Use/Noise Plan*, **Sheet No. 8**, is to coordinate land uses both on the airport property and in surrounding areas, so that land uses are compatible and able to function without major constraints or annoyance. The major objective of this plan is to protect and secure this valuable

community asset, and the investment of community, state, and federal dollars.

The boundaries of the *Land Use/Noise Plan* are defined by a somewhat subjective area illustrated on **Sheet No. 8** as the *Airport Influence Area*. This area essentially describes the 60 Ldn noise contour predicted for the airport at full capacity.

In December 1990, the City adopted Ordinance #2574 which established the Air Field Overlay District and eight Compatible Use Sub-Districts within the Overlay District. These Sub-Districts describe areas within which specific land uses are recommended and sound attenuation requirements, in some cases, are prescribed. The ordinance also contains height restrictions to be applied in the area surrounding the airport. A copy of the City of Mesa's Air Field Overlay District Ordinance is included in **Appendix C.**

EXISTING LAND USE

The land uses existing in the area north of the airport are the most compatible with airport development. The majority of the land uses in this area are industrial or vacant. To the northwest, just east of the canal, a low density residential unit is under development. Agricultural land use exists between the residential areas and Greenfield Road.

West of the airport and Greenfield Road another low density residential development is under construction. Southwest of the airport, industrial or public land use predominates. Low density residential development also exists in this area.

To the south of the airport vacant land and industrial use is predominate for approximately one half mile south and then single family residential is the dominant land use. Southeast of the airport the land is vacant for less than a quarter of a mile and then residential (the planned residential area known as Alta Mesa) land use predominates. Two public schools and a golf course also exist in this area.

To the east of the airport, beginning at Higley Road, is the planned residential community of Apache Wells. This development has mixed residential use from mobile homes to single family residences. Some of the homes are located near the golf course that is located within the planned community.

Northeast of the airport the land is predominantly vacant except for a small residential area in the northwest corner of this section of land. Another planned residential community, Red Mountain Ranch, is located approximately 2 miles northeast of the airport.

PLANNED LAND USE

Jurisdiction over land use planning in the vicinity of the airport is the responsibility of Mesa. The future land uses recommended on this plan were contained in the General Plan for the City of Mesa. Although residential land uses are in close proximity to the airport, the City of Mesa and airport management have worked closely with the residential community to insure that the airport is operated in the best interests of the airport tenants and the surrounding urban area. It is important that the City of Mesa consider conducting a Part 150 Noise study as soon as practical in order to insure the viability of the airport in the future.

Compatible land use guidelines are based upon protection of airport approach and runway protection zone surfaces and the noise impact caused by airport operations. It is important to emphasize that noise contours generated by aircraft utilizing the airport are guides to proper land use planning. While it is sometimes impractical to change pre-existing land uses that are considered incompatible with airport operations, it is desireable to protect those lands within the

influence area from further incompatible land use development.

The noise contours are only one facet of compatible land use planning among many that support the Mesa General Plan. Other factors include: The Red Mountain Freeway Corridor, the Mesa Freeways Corridor Study and Mesa Economic Development Strategies. In addition, compatibility with existing land uses such as McDonnell Douglas Helicopters, Talley Industries, TRW and others, plays an important role in the General Plan. There are also existing approved and conceptual zoning as well as safety issues that must be considered. All of these factors play a role in the General Plan and all must be considered in the compatible land use planning process.

NOISE PLAN

In developing the *Land Use/Noise Plan*, three primary compatibility factors were analyzed and related to the Mesa-Falcon Field Airport environs. Airport hazards are the first factor. Airport hazards can interfere with the landing, takeoff, and flight of aircraft. The criteria for airport hazards were defined and illustrated in the Part 77 *Airspace Plan, Approach Zone Profiles* and *Protection Zones Plan.*

Noise Contours

The second major compatibility factor is aircraft noise and its potential impact on off-airport land use. Noise levels anticipated by future aircraft operations for the year 2015 have been determined through the use of the Integrated Noise Model (INM). This is a computer model which predicts noise exposure levels generated by aircraft operations over a 24 hour period. In general, the FAA recommends that residential and other noise sensitive land uses not be constructed within the 65 Ldn contour area.

The noise contours generated for Mesa-Falcon Field Airport are depicted in **Exhibit 5A** and **5B**, in Chapter Five, Environmental Evaluation. Based on the level and type of aviation activity anticipated throughout the 20-year planning period and the INM methodology, the 65 Ldn noise contour extends beyond the existing airport property to the northeast and to the southwest. The acquisition of property impacted by the future 65 Ldn noise contour to the southwest is an airport development project in Stage I. The land impacted by the 65 Ldn noise contour to the northeast is in existing and future compatible land use. The acquisition of additional avigation easements may be necessary to protect the property interest in this area.

The noise contours presently being used for land use planning by the City of Mesa Community Development and Planning Department, were based on the average day of the peak month at the *maximum capacity* of the existing airport runway configuration. In order to provide the City of Mesa with an airport land use plan that is based on a similar condition, a new set of noise contours were projected for the *Land Use/Noise Plan* based on the proposed airport configuration and the projected maximum capacity of the airport (433,600 operations annually). The noise contours were constructed using the same INM methodology that was used to construct the noise contours displayed on **Exhibits 5A and 5B** in the previous chapter. The aircraft arrival, departure and local traffic patterns were assumed to remain similar to existing conditions.

There was some discussion during the master plan suggesting that the airport examine the potential of a south traffic pattern. After further examination of this proposal, it was recommended that the airport not consider the use of a south traffic pattern unless FAA indicated a south traffic pattern was required in the interest of air traffic safety. The assumption that traffic patterns would remain

the same in the future may be somewhat questionable but any other possibility could not be examined under the scope of this master plan.

The assumptions used in the INM model to project the maximum capacity noise contour pattern for Mesa-Falcon Field require additional study which is beyond the scope of this master plan. It is recommended that a FAA Part 150 Noise Compatibility Study be conducted as early in the planning period as possible in order that the *Land Use/Noise Plan*, any alterations of traffic patterns and possible noise impacts could be examined in greater detail. A Part 150 study provides a more thorough noise impact analysis than is available through the master plan process.

Land Use Sensitivities

The third factor relates to other land use sensitivities outside of the 65 Ldn noise contour. Although the planning guidelines formulated by the FAA are based upon noise impacts, experience has shown that residential land uses in the proximity of airports (particularly within the approaches to an airport) often produce negative reactions from people located in these areas. This adverse reaction is due less to the noise impact and more to the aircraft overflight. It was for this reason that the Air Field Overlay District was designed for the Mesa-Falcon Field Airport.

Residential land uses, for example, are often sensitive to noise or aircraft overflight since those activities associated with residential uses (relaxation, sleep, and speech) can be adversely impacted by noise events. Similarly, schools, libraries, and other public buildings normally require an interior noise environment suitable for uninterrupted speech communication and are also considered noise-sensitive. When circumstances permit, these land uses should not be planned in areas of airport traffic patterns and approaches to runways, even though the noise level is not considered significant.

In contrast, agricultural, industrial, and commercial land uses can adequately function under higher noise exposure levels and, thus, are considered a more compatible type of development for these areas.

The on-airport land use plan indicates the entire airfield as general industrial land use by the City of Mesa. In order to retain consistency with the City's General Plan designations for land use on the *Land Use/Noise Plan*, this land use category is also used. Recommendations for specific on-airport land use are described on the ALP and Terminal Area Plans (**Sheet Nos. 2, 3, and 4**). Following the general recommendations on these plans, the airport can maintain an excellent relationship between the users and the community.

AIRPORT FENCING PLAN

The *Airport Fencing Plan*, **Sheet No. 8**, depicts the existing and future security fencing and stages of installation throughout the planning period. The types of fencing and the planned changes, as well as the future development plan for the airport, are also depicted on this plan.

SUMMARY

The Airport Layout Plan set is designed to provide basic guidance for the City in making decisions relative to future development at Mesa-Falcon Field Airport. The plan provides for development to satisfy both the short term and long range needs. Flexibility will be a key to future development as demands are not likely to occur exactly as forecast. The plan has considered demands that could be placed upon the airport even beyond the twenty year period to ensure the facility is capable of accommodating a variety of circumstances. The City of Mesa should review the *Airspace Plan* to ensure that the Airfield Overlay District Zoning Ordinance

incorporates the height restrictions illustrated on this drawing.

The plans also provide the City with options to pursue in marketing the assets of the airport for community development. Following the general recommendations of the plan, the airport can maintain it's long term viability and continue to provide first-class air transportation services to the region.

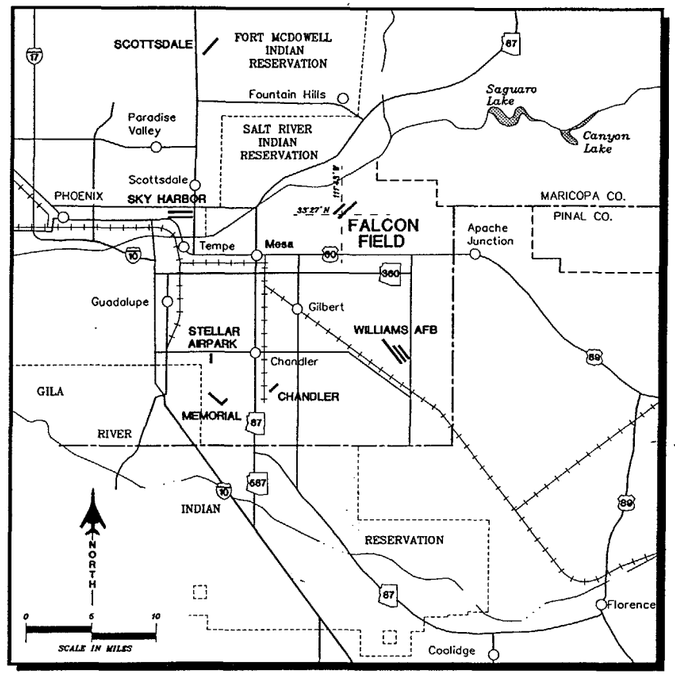
MESA-FALCON FIELD

AIRPORT LAYOUT PLANS

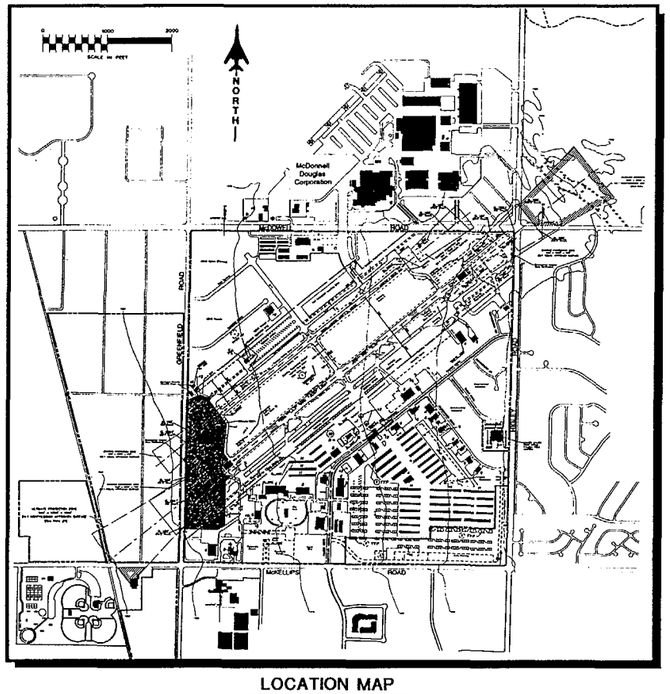
INDEX OF DRAWINGS

FAA AIP# 3-04-0023-03
ADOT TRACS# A5906 / 5010N156

MESA, ARIZONA



VICINITY MAP



LOCATION MAP

AIRPORT DATA

FALCON FIELD (FFZ)

CITY: MESA, Arizona — COUNTY: MARICOPA, Arizona

RANGE: 6 EAST — TOWNSHIP: 1 NORTH — CIVIL TOWNSHIP: Not Applicable

		EXISTING	ULTIMATE
AIRPORT SERVICE LEVEL		RELIEVER	RELIEVER
AIRPORT REFERENCE CODE		B - II	B - II
AIRPORT ELEVATION		1391.6' MSL	1393.5' MSL
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH		105° F	Same
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 1927)	Latitude	33°27'38.874" N	33°27'39.825" N
	Longitude	111°43'39.464" W	111°43'39.309" W
AIRPORT and TERMINAL NAVIGATIONAL AIDS		ATCT Segmented Circle Rotating Beacon	ATCT NDB-On Airport Rotating Beacon Tetrahedron

RUNWAY END COORDINATES (NAD 1927)

RUNWAY 4L	Latitude	33°27'29.731" N	Same
	Longitude	111°44'00.556" W	Same
RUNWAY 22R	Latitude	33°27'53.306" N	Same
	Longitude	111°43'25.626" W	Same
RUNWAY 4R	Latitude	33°27'21.088" N	33°27'19.096" N
	Longitude	111°44'00.206" W	111°44'02.656" W
RUNWAY 22L	Latitude	33°27'52.718" N	33°27'56.438" N
	Longitude	111°43'13.315" W	111°43'08.086" W

RUNWAY DATA

	RUNWAY 4L-22R		RUNWAY 4R-22L	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY REFERENCE CODE	B - I	B - II	B - II	Same
RUNWAY AZIMUTH	51.1569°	Same	51.1725°	Same
RUNWAY BEARING	N 51°09'25"" E	Same	N 51°10'21"" E	Same
RUNWAY DIMENSIONS	3,800' x 75'	Same	5,100' x 100'	6,000' x 100'
RUNWAY INSTRUMENTATION	None	Same	None	Nonprec./Nonprec.
RUNWAY APPROACH SURFACES	20:1/20:1	Same	20:1/20:1	34:1/34:1
RUNWAY THRESHOLD DISPLACEMENT	None	Same	None	395'/660'
RUNWAY STOPWAY	None	Same	None	Same
RUNWAY SAFETY AREA	4,280' x 120'	4,400' x 150'	5,700' x 150'	6,540' x 150'
RUNWAY OBSTACLE FREE ZONE	4,200' x 250'	Same	5,500' x 400'	6,400' x 400'
RUNWAY OBJECT FREE AREA	4,800' x 500'	4,758' x 600'	6,216' x 500'	6,216' x 600'
TAKEOFF RUN AVAILABLE (TORA)	3,800'/3,800'	Same	5,100'/5,100'	6,000'/6,000'
TAKEOFF DISTANCE AVAILABLE (TODA)	3,800'/3,800'	Same	5,100'/5,100'	6,000'/6,000'
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)	3,800'/3,800'	Same	5,100'/5,100'	6,000'/6,000'
LANDING DISTANCE AVAILABLE (LDA)	3,800'/3,800'	Same	5,100'/5,100'	5,605'/5,376'
PAVEMENT MATERIAL	Asphalt/Concrete	Same	Asphalt/Concrete	Same
PAVEMENT SURFACE TREATMENT	None	Same	None	Same
PAVEMENT STRENGTH (in thousand lbs.)[1]	12.5(S)	Same	38(S)/50(D)/90(DT)	Same
RUNWAY EFFECTIVE GRADIENT (in %)	.26	Same	.55	.53
RUNWAY MARKING	Visual	Same	Visual	Nonprecision
RUNWAY LIGHTING	MIRL	Same	MIRL	Same
RUNWAY APPROACH LIGHTING	None	Same	None	Same
TAXIWAY LIGHTING	MITL	Same	MITL	Same
TAXIWAY MARKING	Centerline, Signage	Same	Centerline, Signage	Same
NAVIGATIONAL AIDS	NDB PAPI-2	REILS	NDB PAPI-2 REIL	NDB-On Airport Same

[1] Pavement strengths are expressed in Single(S), Dual(D), Dual Tandem(DT), and/or Double Dual Tandem(DDT) wheel loading capacities.

DEVIATIONS FROM FAA AIRPORT DESIGN STANDARDS

DEVIATION DESCRIPTION	EFFECTED DESIGN STANDARD	STANDARD	ACTUAL	PROPOSED DISPOSITION
Inadequate Object Free Area-Runway 4L	Ultimate Object Free Area	600' from runway end	460' from runway end	Request Waiver
Inadequate Object Free Area-Runway 22R	Ultimate Object Free Area	600' from runway end	498' from runway end	Request Waiver
Airport Hazard-Runway 4R	F.A.R. Part 77 Criteria	15' vertical clearance	0' vertical clearance	Displace threshold 395'
Inadequate Object Free Area-Runway 4R	Existing Object Free Area	600' from runway end	516' from runway end	Request Waiver
Inadequate Object Free Area-Runway 4R	Ultimate Object Free Area	600' from runway end	166' from runway end	Displace threshold 395'
Airport Hazard-Runway 22L	F.A.R. Part 77 Criteria	15' vertical clearance	0' vertical clearance	Displace threshold 660'
Inadequate Object Free Area-Runway 22L	Ultimate Object Free Area	600' from runway end	166' from runway end	Displace threshold 660'
Inadequate Runway Safety Area-Runway 22L	Ultimate Runway Safety Area	300' from runway end	50' from runway end	Displace threshold 660'

ALL WEATHER WIND COVERAGE

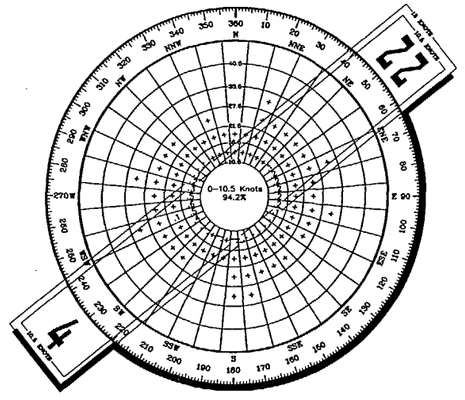
	10.5 Knots	13 Knots
Runway 4-22	98.2%	99.16%

SOURCE:
NOAA National Climatic Center
Asheville, N.C.

DATA STATION:
Phoenix Sky Harbor International Airport
Phoenix, Arizona

OBSERVATIONS:
87,646 Observations
1982-1991

MAGNETIC VARIANCE
12° 17' East (May 1992)



No.	REVISIONS	DATE	BY	APP'D
1	-	-	-	-

"THE PREPARATION OF THESE DOCUMENTS WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREON NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

FALCON FIELD AIRPORT

AIRPORT DATA

MESA, ARIZONA

PLANNED BY: James M. Harris
DETAILED BY: W.S. Holland
APPROVED BY:

August 14, 1992 — SHEET 1 OF 9

Coffman Associates
Airport Consultants

Coffman Associates FFZDATA.DWG 08-14-1992 10:50

SUBMITTED BY: Coffman Associates ON THE DATE OF:

FOR APPROVAL BY:

MESA-FALCON FIELD AIRPORT

APPROVED BY: ON THE DATE OF:

LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PROPERTY LINE
		AIRPORT REFERENCE POINT (ARP)
		AIRPORT ROTATING BEACON
		AVIGATION EASEMENT (if applicable)
		BUILDING CONSTRUCTION
	BRL	BUILDING RESTRICTION LINE (BRL)
		DRAINAGE
		FACILITY ABANDONMENT
		FACILITY CONSTRUCTION
		FENCING (See Sheet 9 of 9)
PAPI-4	PAPI-4	NAVIGATIONAL AID INSTALLATION
		RUNWAY END IDENTIFICATION LIGHTS (REIL)
		RUNWAY THRESHOLD LIGHTS
34|16 16|34		SECTION CORNER
		SEGMENTED CIRCLE/WIND INDICATOR
1060		TOPOGRAPHIC CONTOURS
		UNDERPASS
		WIND INDICATOR (Lighted)

BUILDINGS/FACILITIES

EXISTING	ULTIMATE	DESCRIPTION	ELEVATION
1	---	ADMINISTRATION/TERMINAL BUILDING	
2	---	AIR TRAFFIC CONTROL TOWER (ATCT)	FLOOR 1433'
3	---	AIRPORT RESCUE and FIREFIGHTING (ARFF)/MESA FD.	
4	---	MESA POLICE DEPARTMENT	
5	(5)	FIXED BASE OPERATION HANGAR (Tenant)	
6	---	CONVENTIONAL HANGAR (Tenant)	
7	(7)	T-HANGAR	
8	---	CORPORATE HANGAR (Tenant)	
9	---	UNDERGROUND FUEL STORAGE TANKS	
10	---	FUEL FACILITY (UNDERGROUND TANKS)	
11		COVERED TIEDOWNS	
12	(12)	HELICOPTER FATO (PUBLIC)	
13		HELICOPTER FATO (PRIVATE)	
14		MAINTENANCE YARD	
15		WASH RACK	
	(16)	AUTOMATIC SURFACE OBSERVATION SYSTEM (ASOS)	

GENERAL NOTES:

1. Depiction of features and objects, including related elevations within the runway protection zones are depicted on the PROTECTION ZONES PLANS.
2. Details concerning terminal improvements are depicted on the TERMINAL AREA PLAN.
3. Recommended land uses within the airport environs are depicted on the AIRPORT LAND USE PLAN.
4. The clearances for the Ultimate Approach Surfaces for Runway 4R – 22L are illustrated on the PROTECTION ZONES PLAN Sheet 7 of 9 of these plans.
5. Segmented Circle/Lighted Wind Cone to be replaced with Tetrahedron.
6. Airport Fencing is illustrated on Airport Fencing Plan, Sheet 9 of 9.
7. Relocation of Thresholds and PAPI-2 – Runway 4R: The displaced threshold for Runway 4R after extension is determined by the type of instrument approach to the runway. If Runway 4R has a nonprecision approach with a slope of 34:1, the threshold, and PAPI's should be moved as illustrated. If the slope is 20:1, then the the threshold should be displaced 240 feet and the PAPI relocated to 940 feet from the actual runway end.
8. Relocation of Thresholds and PAPI-2 – Runway 22L: The displaced threshold for Runway 22L after extension is determined by the type of instrument approach to the runway. If Runway 22L has a nonprecision approach with a slope of 34:1, the threshold, and PAPI's should be moved as illustrated. If the slope is 20:1, then the the threshold should be displaced 368 feet and the PAPI relocated to 1,138 feet from the actual runway end.

MAGNETIC VARIANCE-12° 17' East (May 1992)
RATE OF CHANGE 2.2° West

0 400 800 1200
SCALE IN FEET

No.	REVISIONS	DATE	BY	APP'D

"THE PREPARATION OF THESE DOCUMENTS WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

FALCON FIELD AIRPORT

AIRPORT LAYOUT PLAN

MESA, ARIZONA

PLANNED BY: James H. Harris

DETAILED BY: Larry D. Johnson/W.E. Holland

APPROVED BY:

August 20, 1992 SHEET 2 OF 9

Coffman Associates Airport Consultants

Coffman Associates MCDALF.DWG 08-20-1992 17:00

BUILDINGS/FACILITIES

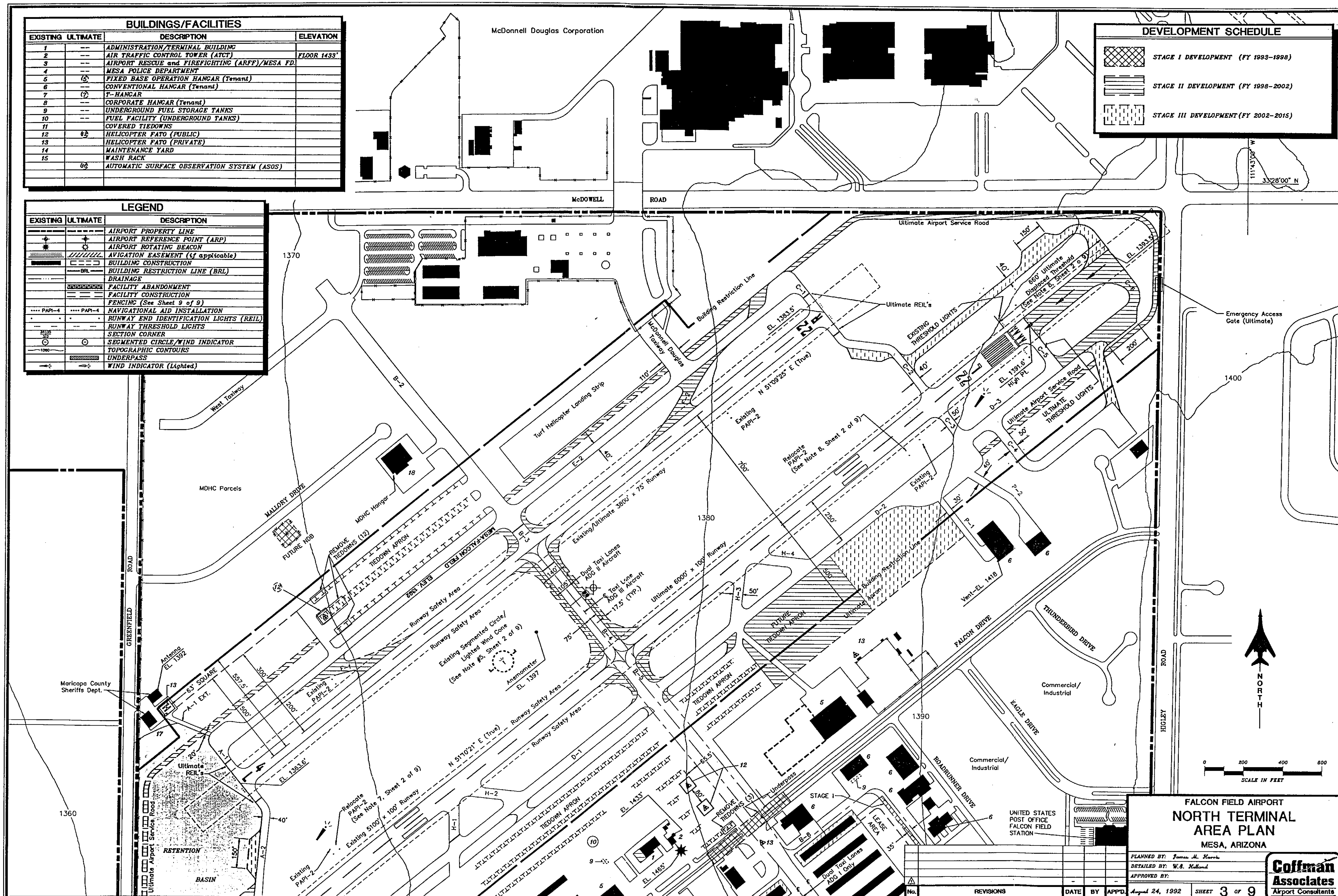
EXISTING	ULTIMATE	DESCRIPTION	ELEVATION
1	--	ADMINISTRATION/TERMINAL BUILDING	
2	--	AIR TRAFFIC CONTROL TOWER (ATCT)	FLOOR 1433'
3	--	AIRPORT RESCUE and FIREFIGHTING (ARFF)/MESA FD.	
4	--	MESA POLICE DEPARTMENT	
5	(5)	FIXED BASE OPERATION HANGAR (Tenant)	
6	--	CONVENTIONAL HANGAR (Tenant)	
7	(7)	T-HANGAR	
8	--	CORPORATE HANGAR (Tenant)	
9	--	UNDERGROUND FUEL STORAGE TANKS	
10	--	FUEL FACILITY (UNDERGROUND TANKS)	
11		COVERED TIEDOWNS	
12	(12)	HELICOPTER FATO (PUBLIC)	
13		HELICOPTER FATO (PRIVATE)	
14		MAINTENANCE YARD	
15		WASH RACK	
	(16)	AUTOMATIC SURFACE OBSERVATION SYSTEM (ASOS)	

LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PROPERTY LINE
		AIRPORT REFERENCE POINT (ARP)
		AIRPORT ROTATING BEACON
		AVIGATION EASEMENT (if applicable)
		BUILDING CONSTRUCTION
	—BRL—	BUILDING RESTRICTION LINE (BRL)
		DRAINAGE
		FACILITY ABANDONMENT
		FACILITY CONSTRUCTION
		FENCING (See Sheet 9 of 9)
···· PAPI-4	···· PAPI-4	NAVIGATIONAL AID INSTALLATION
		RUNWAY END IDENTIFICATION LIGHTS (REIL)
		RUNWAY THRESHOLD LIGHTS
34|35 3|2		SECTION CORNER
		SEGMENTED CIRCLE/WIND INDICATOR
—1060—		TOPOGRAPHIC CONTOURS
		UNDERPASS
		WIND INDICATOR (Lighted)

DEVELOPMENT SCHEDULE

	STAGE I DEVELOPMENT (FY 1993–1998)
	STAGE II DEVELOPMENT (FY 1998–2002)
	STAGE III DEVELOPMENT (FY 2002–2015)



McDonnell Douglas Corporation
McDOWELL
ROAD
Ultimate Airport Service Road
Building Restriction Line
McDonnell Douglas Taxiway
Ultimate REIL's
EXISTING THRESHOLD LIGHTS
660' Ultimate Displaced Threshold (See Note 8, Sheet 2 of 9)
EL. 1383.5'
EL. 1393.5'
EL. 1391.6' High Pt.
N 51°09'25" E (True)
Existing PAPI-2
Relocate PAPI-2 (See Note 8, Sheet 2 of 9)
Turf Helicopter Landing Strip
Existing/Ultimate 3800' x 75' Runway
Ultimate 6000' x 100' Runway
ULTIMATE THRESHOLD LIGHTS
Emergency Access Gate (Ultimate)
111°43'00" W
33°28'00" N
1370
1380
1390
1400
1360
West Taxiway
MDHC Parcels
MALLORY DRIVE
MDHC Hangar
FUTURE NDB
REMOVE TIEDOWNS (12)
TIEDOWN APRON
MESA-FALCON FIELD
ELEV. 1392
Runway Safety Area
Existing Segmented Circle/ Lighted Wind Cone (See Note #5, Sheet 2 of 9)
Anemometer EL. 1397
Dual Taxi Lanes ADG II Aircraft
℄ Taxi Lane ADG III Aircraft 17.5' (TYP.)
FUTURE TIEDOWN APRON
Ultimate Apron
Vent-EL. 1418
FALCON DRIVE
THUNDERBIRD DRIVE
EAGLE DRIVE
ROADRUNNER DRIVE
Commercial/ Industrial
HIGLEY ROAD
GREENFIELD ROAD
Antenna EL. 1392
Maricopa County Sheriffs Dept.
63' SQUARE
A-1 EXT.
EL. 1363.6'
Ultimate REIL's
Ultimate Airport Service Road
RETENTION BASIN
N 51°10'21" E (True)
Existing 5100' x 100' Runway
Relocate PAPI-2 (See Note 7, Sheet 2 of 9)
TIEDOWN APRON
EL. 1433'
EL. 1465'
REMOVE TIEDOWNS (3)
Underpass
STAGE I
LEASE AREA
Dual Taxi Lanes ADG I Only
UNITED STATES POST OFFICE FALCON FIELD STATION
NORTH
SCALE IN FEET

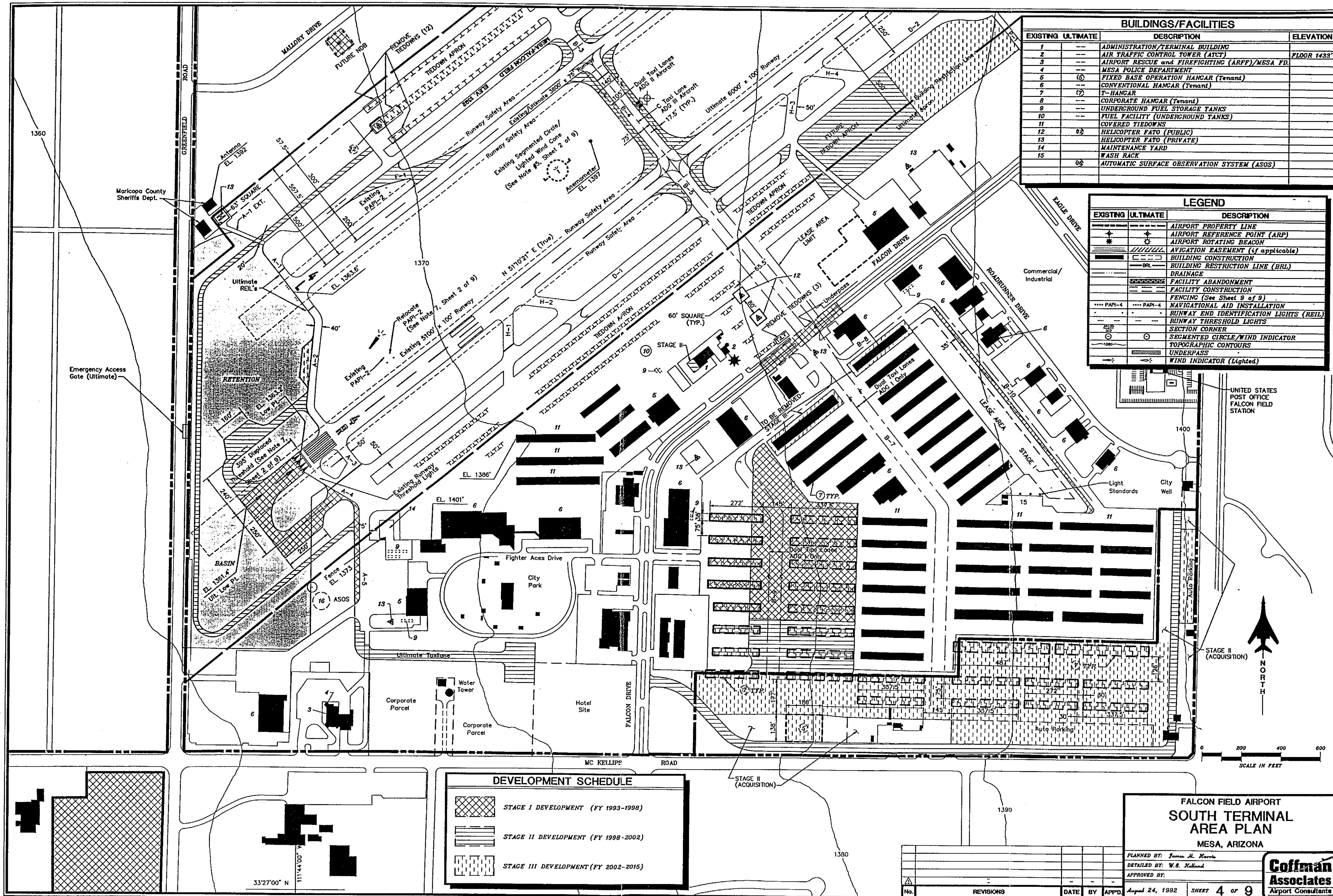
No.	REVISIONS	DATE	BY	APP'D.
		-	-	-

FALCON FIELD AIRPORT
NORTH TERMINAL AREA PLAN
MESA, ARIZONA

PLANNED BY: James M. Harris
DETAILED BY: W.S. Holland
APPROVED BY:
August 24, 1992 — SHEET 3 OF 9

Coffman Associates — Airport Consultants

Coffman Associates FFTAPN.DWG 08-24-1992 14:50



BUILDINGS/FACILITIES

EXISTING	ULTIMATE	DESCRIPTION	ELEVATION
1	--	ADMINISTRATION/TERMINAL BUILDING	
2	--	AIR TRAFFIC CONTROL TOWER (ATCT)	FLOOR 1433'
3	--	AIRPORT RESCUE and FIREFIGHTING (ARFF)/MESA FD.	
4	--	MESA POLICE DEPARTMENT	
5	(5)	FIXED BASE OPERATION HANGAR (Tenant)	
6	--	CONVENTIONAL HANGAR (Tenant)	
7	(7)	T-HANGAR	
8	--	CORPORATE HANGAR (Tenant)	
9	--	UNDERGROUND FUEL STORAGE TANKS	
10	--	FUEL FACILITY (UNDERGROUND TANKS)	
11		COVERED TIEDOWNS	
12	(12)	HELICOPTER FATO (PUBLIC)	
13		HELICOPTER FATO (PRIVATE)	
14		MAINTENANCE YARD	
15		WASH RACK	
	(16)	AUTOMATIC SURFACE OBSERVATION SYSTEM (ASOS)	

LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PROPERTY LINE
		AIRPORT REFERENCE POINT (ARP)
		AIRPORT ROTATING BEACON
		AVIGATION EASEMENT (if applicable)
		BUILDING CONSTRUCTION
	BRL	BUILDING RESTRICTION LINE (BRL)
		DRAINAGE
		FACILITY ABANDONMENT
		FACILITY CONSTRUCTION
		FENCING (See Sheet 9 of 9)
PAPI-4	PAPI-4	NAVIGATIONAL AID INSTALLATION
		RUNWAY END IDENTIFICATION LIGHTS (REIL)
		RUNWAY THRESHOLD LIGHTS
34 35 / 3 2		SECTION CORNER
		SEGMENTED CIRCLE/WIND INDICATOR
1080		TOPOGRAPHIC CONTOURS
		UNDERPASS
		WIND INDICATOR (Lighted)

DEVELOPMENT SCHEDULE

STAGE I DEVELOPMENT (FY 1993-1998)

STAGE II DEVELOPMENT (FY 1998-2002)

STAGE III DEVELOPMENT (FY 2002-2015)

No.	REVISIONS	DATE	BY	APP'D.
	-	-	-	-

FALCON FIELD AIRPORT

SOUTH TERMINAL AREA PLAN

MESA, ARIZONA

PLANNED BY: James M. Harris

DETAILED BY: W.E. Holland

APPROVED BY:

August 24, 1992 SHEET 4 OF 9

Coffman Associates Airport Consultants

Coffman Associates FFZTAPS.DWG 08-24-1992 11:11

OBSTRUCTION TABLE

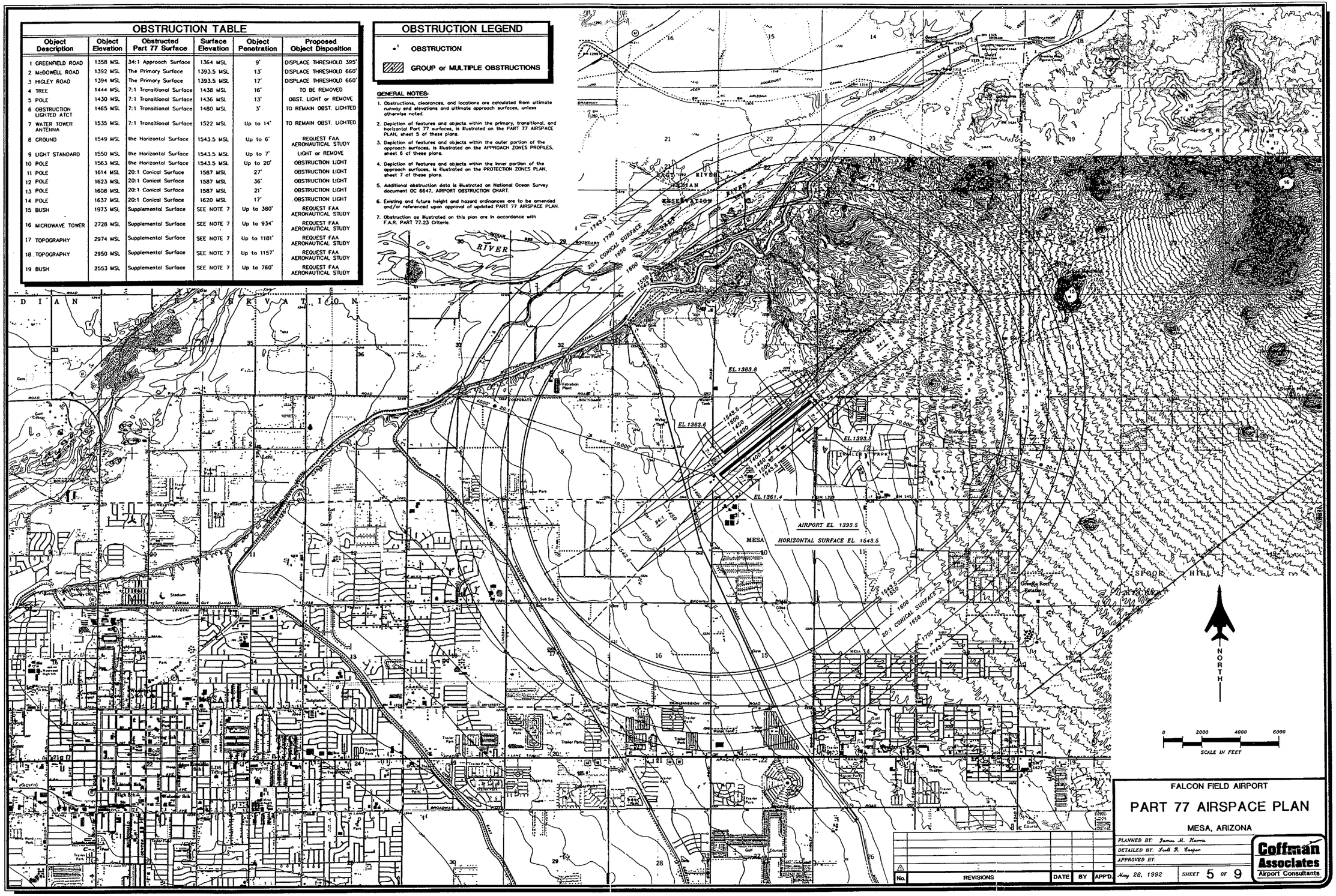
Object Description	Object Elevation	Obstructed Part 77 Surface	Surface Elevation	Object Penetration	Proposed Object Disposition
1 GREENFIELD ROAD	1358 MSL	34:1 Approach Surface	1364 MSL	9'	DISPLACE THRESHOLD 395'
2 McDOWELL ROAD	1392 MSL	The Primary Surface	1393.5 MSL	13'	DISPLACE THRESHOLD 660'
3 HIGLEY ROAD	1394 MSL	The Primary Surface	1393.5 MSL	17'	DISPLACE THRESHOLD 660'
4 TREE	1444 MSL	7:1 Transitional Surface	1438 MSL	16'	TO BE REMOVED
5 POLE	1430 MSL	7:1 Transitional Surface	1436 MSL	13'	OBST. LIGHT or REMOVE
6 OBSTRUCTION LIGHTED ATCT	1465 MSL	7:1 Transitional Surface	1480 MSL	3'	TO REMAIN OBST. LIGHTED
7 WATER TOWER ANTENNA	1535 MSL	7:1 Transitional Surface	1522 MSL	Up to 14'	TO REMAIN OBST. LIGHTED
8 GROUND	1549 MSL	the Horizontal Surface	1543.5 MSL	Up to 6'	REQUEST FAA AERONAUTICAL STUDY
9 LIGHT STANDARD	1550 MSL	the Horizontal Surface	1543.5 MSL	Up to 7'	LIGHT or REMOVE
10 POLE	1563 MSL	the Horizontal Surface	1543.5 MSL	Up to 20'	OBSTRUCTION LIGHT
11 POLE	1614 MSL	20:1 Conical Surface	1587 MSL	27'	OBSTRUCTION LIGHT
12 POLE	1623 MSL	20:1 Conical Surface	1587 MSL	36'	OBSTRUCTION LIGHT
13 POLE	1608 MSL	20:1 Conical Surface	1587 MSL	21'	OBSTRUCTION LIGHT
14 POLE	1637 MSL	20:1 Conical Surface	1620 MSL	17'	OBSTRUCTION LIGHT
15 BUSH	1973 MSL	Supplemental Surface	SEE NOTE 7	Up to 380'	REQUEST FAA AERONAUTICAL STUDY
16 MICROWAVE TOWER	2728 MSL	Supplemental Surface	SEE NOTE 7	Up to 934'	REQUEST FAA AERONAUTICAL STUDY
17 TOPOGRAPHY	2974 MSL	Supplemental Surface	SEE NOTE 7	Up to 1181'	REQUEST FAA AERONAUTICAL STUDY
18 TOPOGRAPHY	2950 MSL	Supplemental Surface	SEE NOTE 7	Up to 1157'	REQUEST FAA AERONAUTICAL STUDY
19 BUSH	2553 MSL	Supplemental Surface	SEE NOTE 7	Up to 760'	REQUEST FAA AERONAUTICAL STUDY

OBSTRUCTION LEGEND

- OBSTRUCTION
- GROUP or MULTIPLE OBSTRUCTIONS

GENERAL NOTES:

1. Obstructions, clearances, and locations are calculated from ultimate runway end elevations and ultimate approach surfaces, unless otherwise noted.
2. Depiction of features and objects within the primary, transitional, and horizontal Part 77 surfaces, is illustrated on the PART 77 AIRSPACE PLAN, sheet 5 of these plans.
3. Depiction of features and objects within the outer portion of the approach surfaces, is illustrated on the APPROACH ZONES PROFILES, sheet 6 of these plans.
4. Depiction of features and objects within the inner portion of the approach surfaces, is illustrated on the PROTECTION ZONES PLAN, sheet 7 of these plans.
5. Additional obstruction data is illustrated on National Ocean Survey document OC 6647, AIRPORT OBSTRUCTION CHART.
6. Existing and future height and hazard ordinances are to be amended and/or referenced upon approval of updated PART 77 AIRSPACE PLAN.
7. Obstruction as illustrated on this plan are in accordance with F.A.R. PART 77.23 Criteria.



FALCON FIELD AIRPORT

PART 77 AIRSPACE PLAN

MESA, ARIZONA

No.	REVISIONS	DATE	BY	APP'D.

PLANNED BY: James A. Harris
DETAILED BY: Scott R. Cooper
APPROVED BY:

May 28, 1992 | SHEET 5 OF 9

Coffman Associates
Airport Consultants

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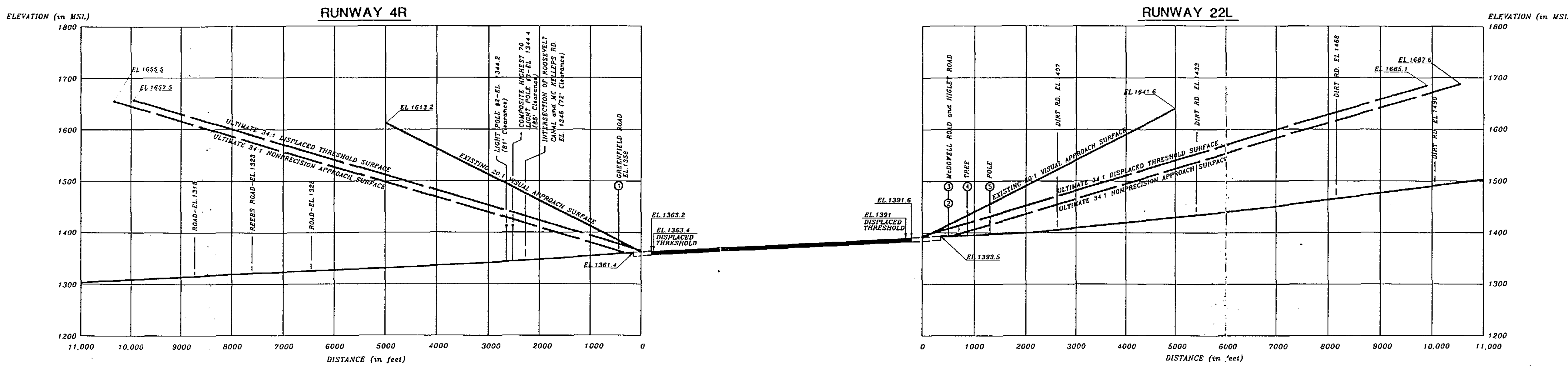
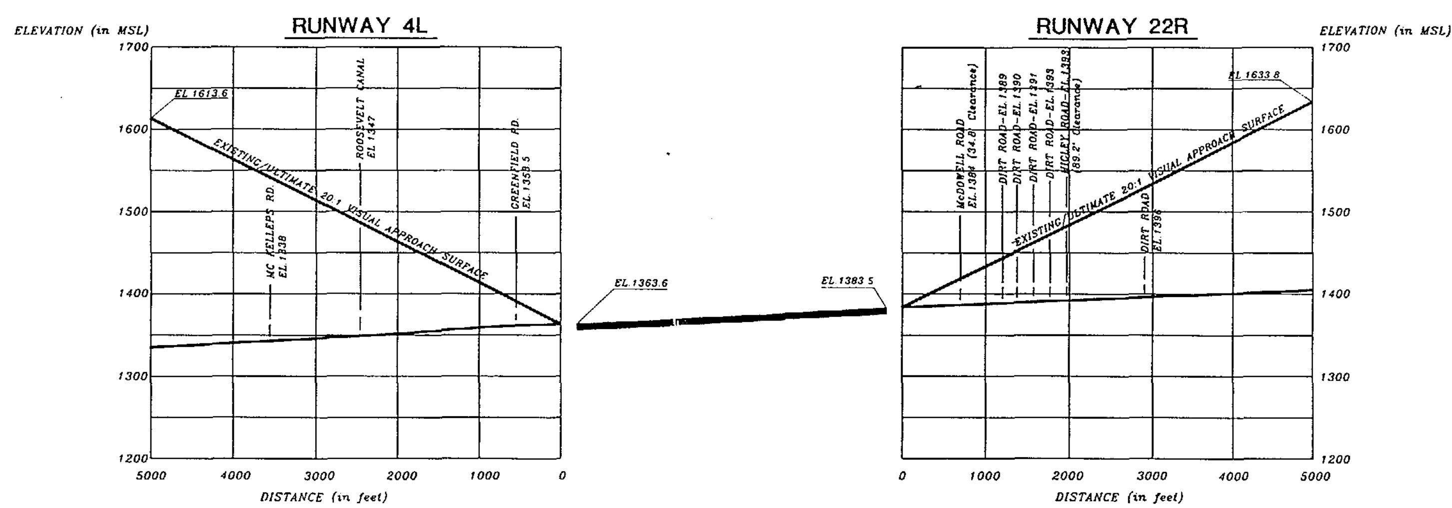


RUNWAY 4R-22L APPROACH ZONE PROFILES



RUNWAY 4L-22R APPROACH ZONE PROFILES

HORIZONTAL SCALE 0 1000 2000 3000 SCALE IN FEET

VERTICAL SCALE 0 100 200 300 SCALE IN FEET

OBSTRUCTION TABLE

Object Description	Object Elevation	Obstructed Part 77 Surface	Surface Elevation	Object Penetration	Proposed Object Disposition
1 GREENFIELD ROAD	1358 MSL	34:1 Approach Surface	1364 MSL	9'	DISPLACE THRESHOLD 395'
2 McDOWELL ROAD	1392 MSL	The Primary Surface	1393.5 MSL	13'	DISPLACE THRESHOLD 660'
3 HIGLEY ROAD	1394 MSL	The Primary Surface	1393.5 MSL	17'	DISPLACE THRESHOLD 660'
4 TREE	1444 MSL	7:1 Transitional Surface	1438 MSL	16'	TO BE REMOVED
5 POLE	1430 MSL	7:1 Transitional Surface	1436 MSL	13'	OBSTRUCTION LIGHT/REMOVE

GENERAL NOTES:

1. Obstructions, clearances, and locations are calculated from ultimate runway end elevations and ultimate approach surfaces, unless otherwise noted.
2. Depiction of features and objects within the primary, transitional, and horizontal Part 77 surfaces, is illustrated on the PART 77 AIRSPACE PLAN, sheet 5 of these plans.
3. Depiction of features and objects within the outer portion of the approach surfaces, is illustrated on the APPROACH ZONES PROFILES, sheet 6 of these plans.
4. Depiction of features and objects within the inner portion of the approach surfaces, is illustrated on the PROTECTION ZONES PLAN, sheet 7 of these plans.
5. Additional obstruction data is illustrated on National Ocean Survey document OC 6647, AIRPORT OBSTRUCTION CHART.
6. Existing and future height and hazard ordinances are to be amended and/or referenced upon approval of updated PART 77 AIRSPACE PLAN.

No.	REVISIONS	DATE	BY	APP'D.

FALCON FIELD AIRPORT

APPROACH ZONE PROFILES RUNWAYS 4R-22L & 4L-22R

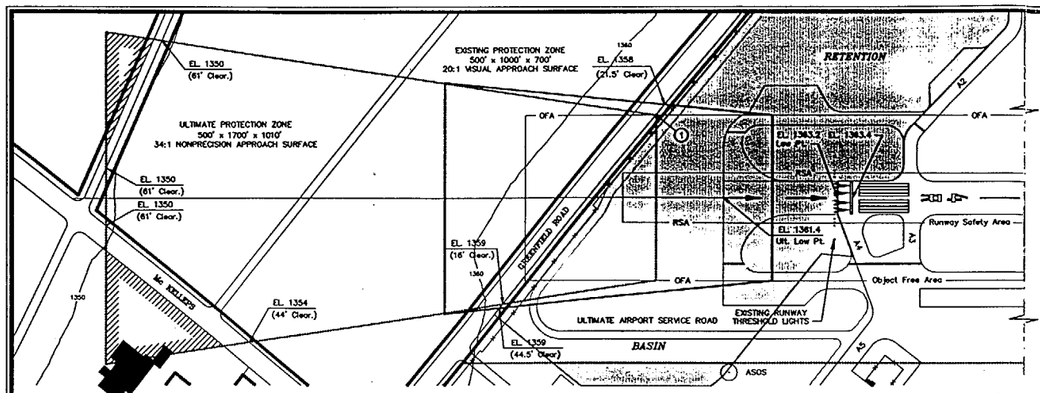
MESA, ARIZONA

PLANNED BY: James M. Harris
DETAILED BY: Scott R. Cooper
APPROVED BY:

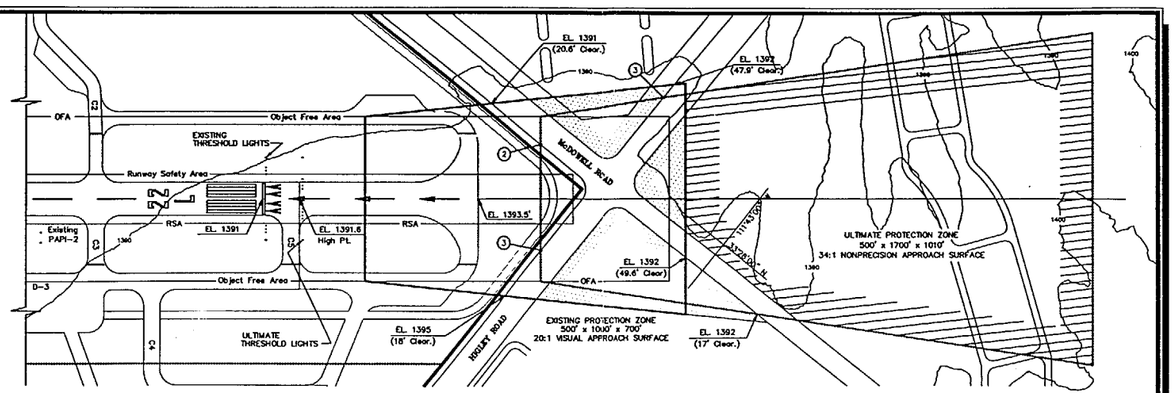
May 28, 1992 — SHEET 6 OF 9

Coffman Associates — Airport Consultants

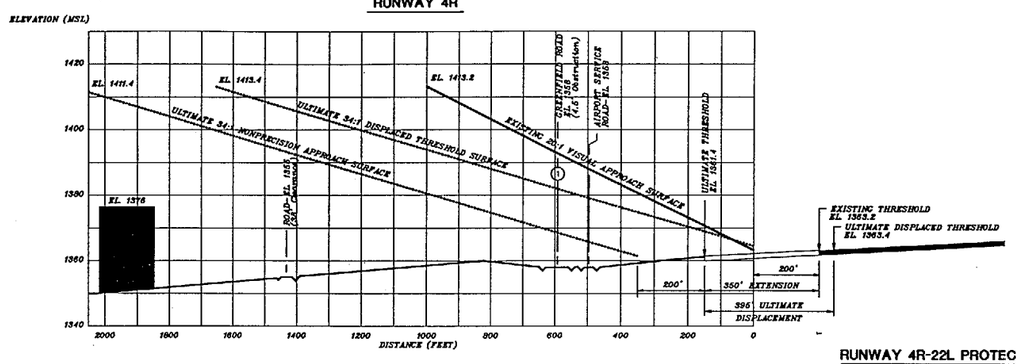
Coffman Associates MESA7P.DWG 06-01-1992 15:21

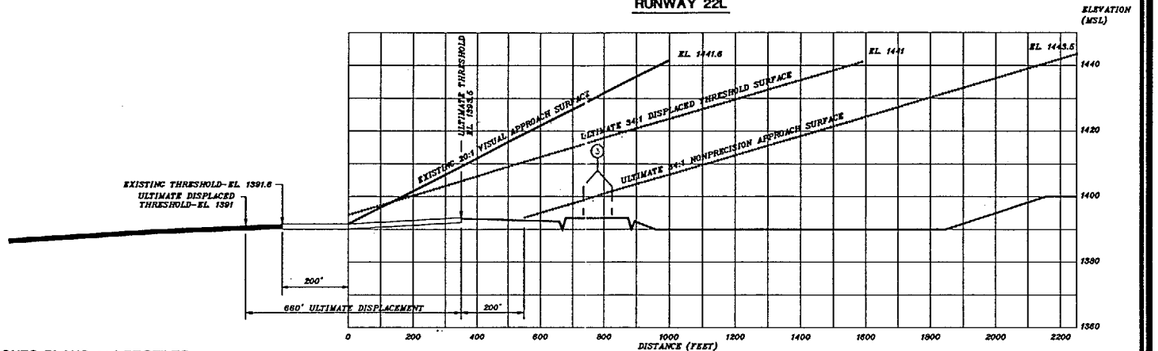


RUNWAY 4R

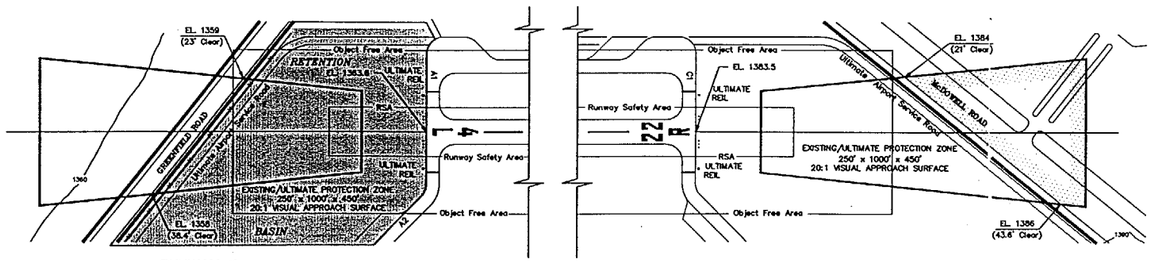


RUNWAY 22L



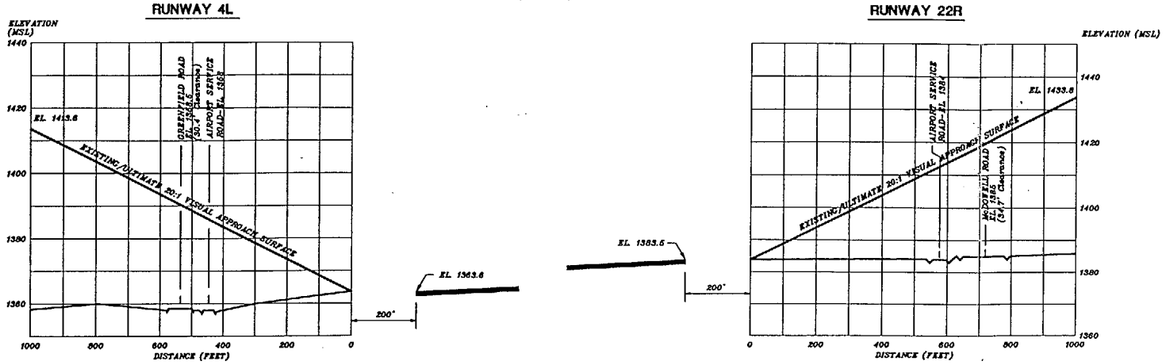


RUNWAY 4R-22L PROTECTION ZONES PLANS and PROFILES



RUNWAY 4L

RUNWAY 22R



RUNWAY 4L-22R PROTECTION ZONES PLANS and PROFILES

GENERAL NOTES:

1. Obstructions, clearances, and locations are calculated from ultimate runway end elevations and ultimate approach surfaces, unless otherwise noted.
2. Depiction of features and objects within the primary, transitional, and horizontal Part 77 surfaces, is illustrated on the PART 77 AIRSPACE PLAN, sheet 5 of these plans.
3. Depiction of features and objects within the outer portion of the approach surfaces, is illustrated on the APPROACH ZONES PROFILES, sheet 6 of these plans.
4. Depiction of features and objects within the inner portion of the approach surfaces, is illustrated on the PROTECTION ZONES PLAN, sheet 7 of these plans.
5. Additional obstruction data is illustrated on National Ocean Survey document OC 6647, AIRPORT OBSTRUCTION CHART.
6. Existing and future height and hazard ordinances are to be amended and/or referenced upon approval of updated PART 77 AIRSPACE PLAN.

OBSTRUCTION TABLE

Object Description	Object Elevation	Obstructed Part 77 Surface	Surface Elevation	Object Penetration	Proposed Object Disposition
1 GREENFIELD ROAD	1358 MSL	34:1 Approach Surface	1364 MSL	9'	DISPLACE THRESHOLD 395'
2 McDOWELL ROAD	1392 MSL	The Primary Surface	1393.5 MSL	13'	DISPLACE THRESHOLD 660'
3 HIGLEY ROAD	1394 MSL	The Primary Surface	1393.5 MSL	17'	DISPLACE THRESHOLD 660'
4 TREE	1444 MSL	7:1 Transitional Surface	1438 MSL	18'	TO BE REMOVED
5 POLE	1430 MSL	7:1 Transitional Surface	1438 MSL	13'	OBSTRUCTION LIGHT/REMOVE

HORIZONTAL SCALE 0 200 400 600 — SCALE IN FEET

VERTICAL SCALE 0 20 40 60 — SCALE IN FEET

No.	REVISIONS	DATE	BY	APP'D.
	-	-	-	-

"THE PREPARATION OF THESE DOCUMENTS WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREON NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

FALCON FIELD AIRPORT

PROTECTION ZONES PLAN RUNWAYS 4R-22L & 4L-22R

MESA, ARIZONA

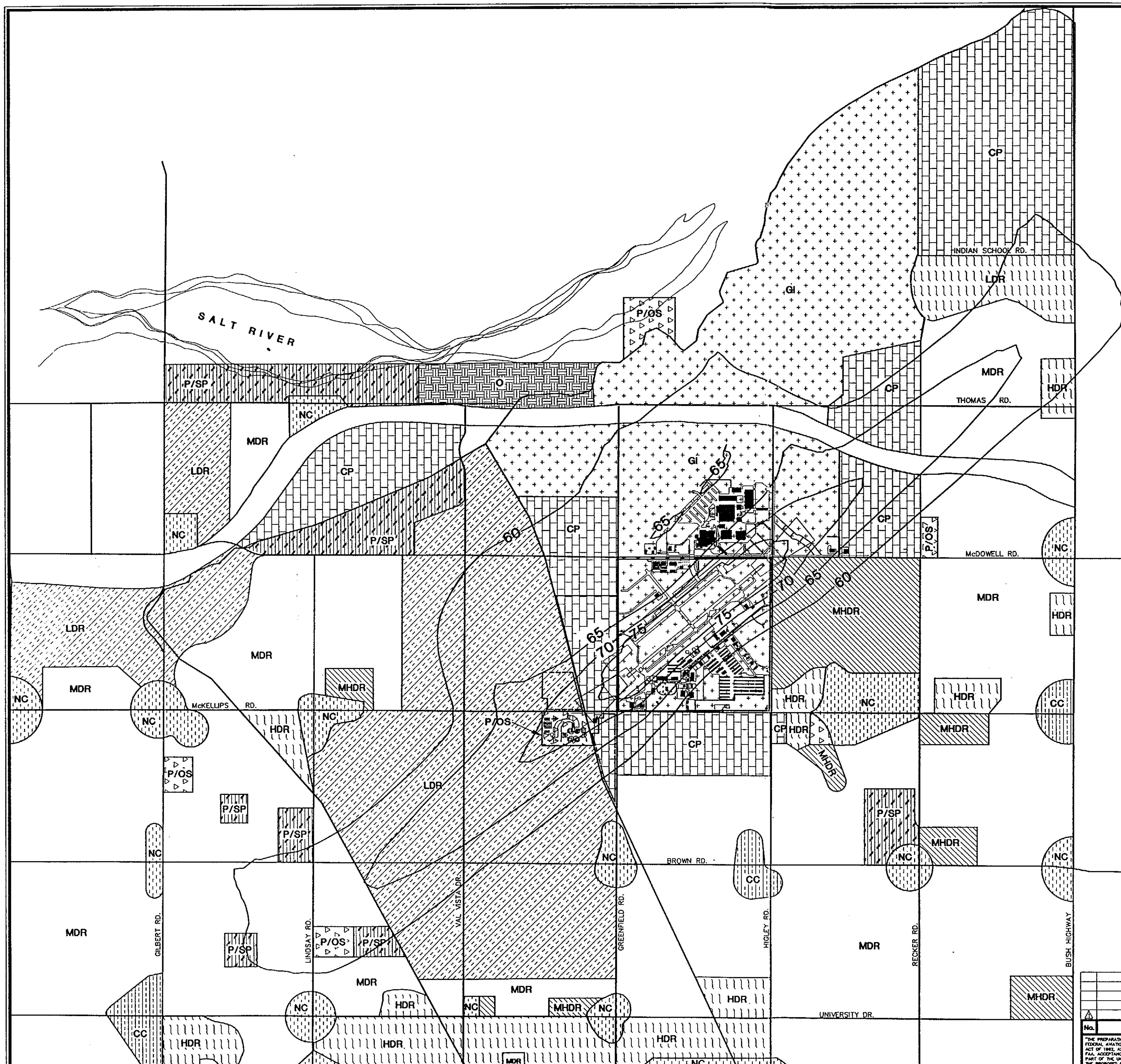
PLANNED BY: James A. Kovacs

DETAILED BY: Larry D. Johnson/W.B. Holland

APPROVED BY:

August 28, 1992

Coffman Associates Coffman Associates Airport Consultants



AIRPORT LAND USE LEGEND

LDR	LOW DENSITY RESIDENTIAL (1-2 D.U. / AC)
MDR	MEDIUM DENSITY RESIDENTIAL (3-5 D.U / AC.)
MHDR	MEDIUM-HIGH DENSITY RESIDENTIAL (6-10 D.U. / AC.)
HDR	HIGH DENSITY RESIDENTIAL (10 +D.U. AC.)
CC	COMMUNITY COMMERCIAL
NC	NEIGHBORHOOD COMMERCIAL
O	OFFICE
CP	COMMERCIAL PARK
GI	GENERAL INDUSTRIAL
P/SP	PUBLIC / SEMI-PUBLIC
P/OS	PUBLIC / OPEN SPACE

NOTES:

1. Recommended Land Uses were obtained form the City of Mesa's General Plan, adopted by the City Council on December 19, 1988 (and subsequently revised June 1990). Land Uses are generalized by location and use and may incorporate other compatible zoning designations and uses.

2. Noise Contours were obtained from the Falcon Field Airport Compatibility Use District and Avigation Easement Map, City of Mesa, Community Development and Planning Department, 1990.

0 1600 3200 4800
SCALE IN FEET

No.	REVISIONS	DATE	BY	APP'D.

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FALCON FIELD AIRPORT

LAND USE / NOISE PLAN

MESA, ARIZONA

PLANNED BY: James M. Harris
DETAILED BY: W.S. Holland
APPROVED BY:
September 4, 1992 SHEET 8 OF 9

Coffman Associates
Airport Consultants

LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PROPERTY LINE (See Sheet 2 of 9)
		AIRPORT REFERENCE POINT (ARP)
		AIRPORT ROTATING BEACON
		AVIGATION EASEMENT (if applicable)
	BRL	BUILDING CONSTRUCTION
	BRL	BUILDING RESTRICTION LINE (BRL)
		DRAINAGE
		FACILITY ABANDONMENT
		FACILITY CONSTRUCTION
		FENCING (See below)
PAPI-4	PAPI-4	NAVICATIONAL AID INSTALLATION
		RUNWAY END IDENTIFICATION LIGHTS (REIL)
		RUNWAY THRESHOLD LIGHTS
24125 30'		SECTION CORNER
		SEGMENTED CIRCLE/WIND INDICATOR
1080		TOPOGRAPHIC CONTOURS
		UNDERPASS
		WIND INDICATOR (Lighted)

EXISTING FENCES

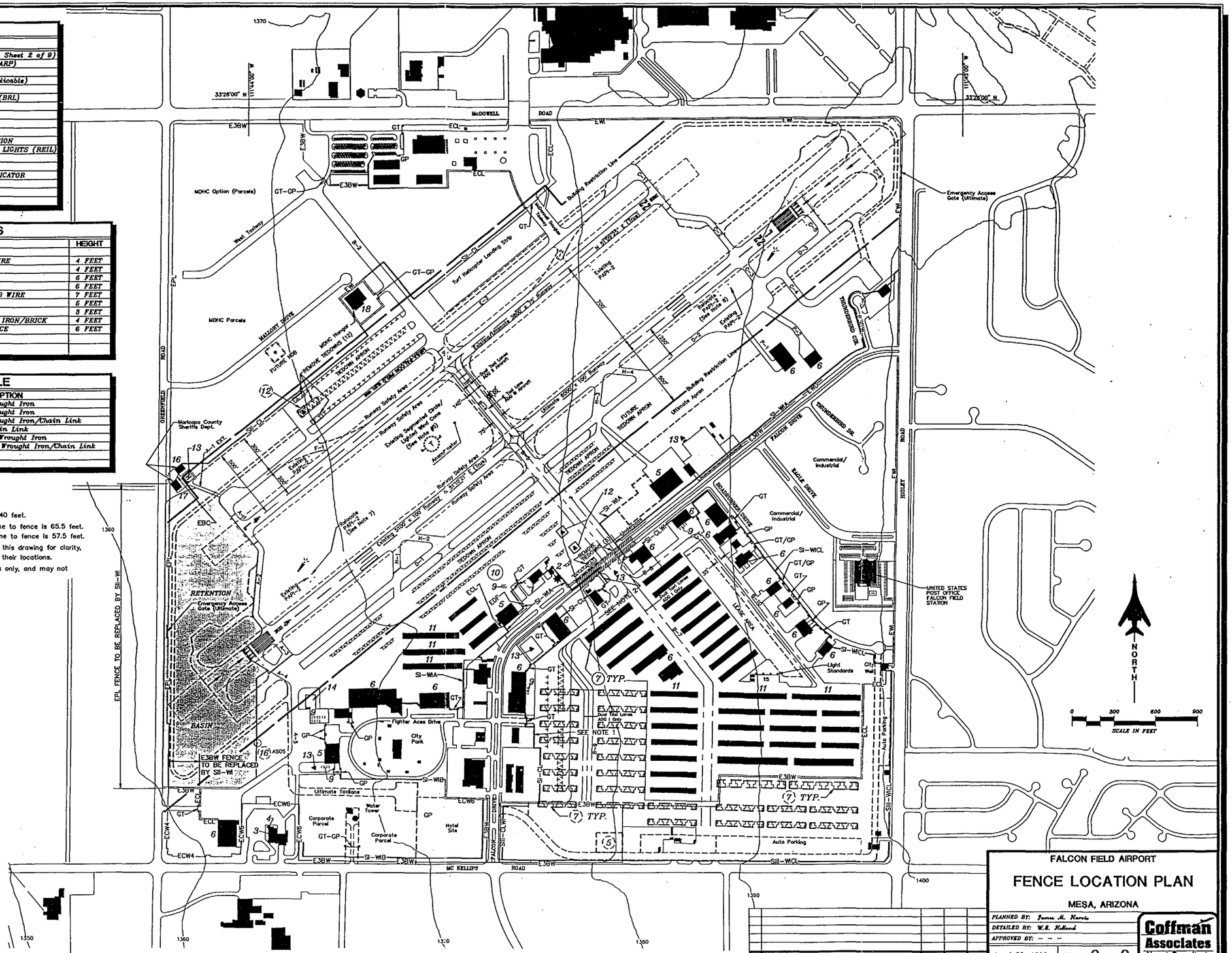
	DESCRIPTION	HEIGHT
EWD	EXISTING WOOD FENCE	4 FEET
E3BW	EXISTING 3-STRAND BARB WIRE	4 FEET
ECW4	EXISTING CONCRETE WALL	4 FEET
ECW6	EXISTING CONCRETE WALL	6 FEET
ECL	EXISTING CHAIN LINK	6 FEET
ECLBW	EXISTING CHAIN LINK / BARB WIRE	7 FEET
EPL	EXISTING PAGE LINK	6 FEET
EBC	EXISTING BARRIER CHAIN	3 FEET
EDF	EXISTING DECORATIVE FENCE IRON/BRICK	4 FEET
EW	EXISTING WROUGHT IRON FENCE	6 FEET
	GATE TRUCK	
	GATE PERSONNEL	

FENCES SCHEDULE

	DESCRIPTION
SI-WA	STAGE I (FY 1993-94) 6' Wrought Iron
SI-WB	STAGE I (FY 1994-95) 6' Wrought Iron
SI-WCL	STAGE I (FY 1995-96) 6' Wrought Iron/Chain Link
SI-CL	STAGE I (FY 1996-97) 6' Chain Link
SII-WI	STAGE II (FY 1998-2003) 6' Wrought Iron
SIII-WCL	STAGE III (FY 2003-2015) 6' Wrought Iron/Chain Link
	GATE TRUCK
	GATE PERSONNEL

NOTES:

1. Minimum distance from taxilane centerline to fence is 40 feet.
2. Single Taxiway—Minimum distance from taxiway centerline to fence is 65.5 feet. Dual Taxilanes—Minimum distance from taxilane centerline to fence is 57.5 feet.
3. Existing and Ultimate Property Lines are not shown on this drawing for clarity, please reference Airport Layout Plan, Sheet 2 of 9 for their locations.
4. Fence loactions shown here are for illustrative purposes only, and may not represent actual field locations.



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FALCON FIELD AIRPORT

FENCE LOCATION PLAN

MESA, ARIZONA

PLANNED BY: James M. Harris
DETAILED BY: W.S. Holland
APPROVED BY: - - -

August 26, 1992 | SHEET 9 OF 9

Coffman Associates — Airport Consultants

No.	REVISIONS	DATE	BY	APP'D